**Amateur Bands Observations In The Ameren BPL Trial Area**

Merle Bone, a member of the Mississippi Valley DX and Contesting Club, traveled from St. Louis to Cape Girardeau, Missouri, on the 17th of April 2004. He made S-Meter measurements of the HF noise signals that were, apparently, attributable to the BPL trial in the area. The equipment used was a Yaesu FT100D and two antennas; an HV7A multi-band mobile antenna that was resonant on 20M, 10M, 6M, 2M, and 430 MHz and a 40M Hamstick. Most of the measurements were made on 20M and 40M. Other bands were checked and, although the antenna was not resonant nor impedance matched on those other bands, some observations and measurements were made. Out of the trial area, the ambient noise level on 20M and 40M was S0 to S1.

From the measurements made, the trial area appeared to be, primarily, east of (and including) Bellridge Pike Lane, North of (and including) Melrose St., west of (and including) Grandview Dr. and south of Lexington Ave. There were also strong signals along Kurre Lane and west of the intersection of Kurre Lane and Kingshighway Drive.

The first measurements were done with the HV7A antenna. The following measurements were made:

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| 1. Bellridge Pike & Melrose | 14.220 MHz | S9+30DB |
| 2. Bellridge Pike & Magnolia Ave. | 14.220 MHz | S9+10DB |
| 3. Bellridge Pike & Lexington | 14220 MHz | S9 |
| 4. Bellridge Pike & Pamela | 14220 MHz | S0 |
| 5. Melrose & Carolina Lane | 14220 MHz | S9+20 |
| 6. Melrose & Grandview Dr. | 14220 MHz | S9 |

From the measurements, it appears that the strongest signals were at Bellridge Pike & Melrose St. and that the signals fell off as you went north or east of that intersection.

The HV7A was removed and the 40M Hamstick was installed. I then re-ran the area looking primarily for noise signals at 7.2 MHz. The signal levels

generally duplicated the measurements above – with the exception that the signal levels along Melrose St. appeared to be 5 to 10DB higher at 7.2 MHz.

I also measured signal levels on other bands with the HV7A antenna – bands where the HV7A was neither resonant not impedance matched to the transceiver. Those measurements showed:

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| Melrose St. And Caroline Lane | 18150 MHz | S8 |
| | 21300 MHz | S9 |
| Kurre Lane & Kingshighway Drive | 21300 MHz | S7 |
| | 10 MHz | S2 |

In General, once you got 3 to 5 blocks from the strong signal area, the ambient noise level was S0 to S1 on both 20M and 40M.

The results of these measurements indicated that it was impossible to operate, with any reasonable effectiveness, a licensed amateur transceiver, either fixed or mobile, in the HF bands of 40Meters, 30Meters, 20Meters, 17Meters and 15Meters. The interfering signals were even strong enough, several blocks outside the test area, to severely limit the signals that could be effectively received in those bands. It should be noted that the use of WWV, in the 10MHz band, to provide effective standards signals, was prevented by the BPL signals at that frequency. This data indicates that effective interference abatement is critical, if BPL is implemented in the High Frequency radio spectrum, to assure the ability of licensed users to effectively use that spectrum.

Note: Bellridge Pike is an extension of Kurre Lane